REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

New Claim 7 further recites that the thermally reducing step is performed in a reducing atmosphere.

As a threshold matter, Applicants note that the examiner has clarified, in a discussion held on June 22, 2004, that the rejections based on Nishimura as the primary reference were introduced inadvertently, and should be disregarded. That is, the "Status of Previous Rejections" portion of the Office Action is controlling.

Claims 1 and 4-6 were again rejected as being obvious over Meissner et al in view of Fuji et al, either alone or further in view of Sarma et al. Applicants had previously traversed this rejection because the claims recite that at least the secondary combustion air is oxygen enriched air, and the oxygen concentration in the primary combustion air is controlled to be lower than that in the secondary combustion air. For example, the oxygen concentration in the primary combustion air E is controlled to be lower than that in the oxygen enriched secondary combustion air F. This reduces the amount of nitrogen oxides (NO_x) generated in the reducing furnace, because the primary burners 3 burn a higher calorific value fuel whose flame temperature would be excessive in the case of a high oxygen concentration (see specification, pages 11-12).

Applicants had also explained that Meissner et al describes that the burners 52 are supplied with oxygen enriched air, **but there is no teaching therein of selective supply of the oxygen enriched air for secondary combustion air so that the oxygen concentration in the primary combustion air is lower than that in the secondary combustion air.** In fact, Meissner et al teaches that "efficient combustion is achieved due to the high operating temperature" (col. 6, lines 7-8) and "operating with an oxidizing atmosphere at high temperature in the early stage of heating and reduction" (col. 6, lines 12-13). Meissner et al

thus teaches against a low oxygen concentration in a primary combustion air since this would reduce the operating temperature in the early stage of heating.

The rejections relying on Meissner et al have been maintained, evidently because the "claims do not preclude" the oxidizing atmosphere of Meissner et al. That is, according to Applicants' understanding of the Office Action, the claims could encompass the oxygen rich atmosphere taught for the primary combustion air of Meissner et al, so long as an even higher oxygen content were provided for the secondary air of Meissner et al. However, this ignores the fact that *there is no teaching* in Meissner et al for providing such an even higher oxygen content for the secondary air, and so no evidentiary basis for this conclusion. Additionally, an even higher oxygen content for the secondary air in Meissner et al would have made no sense from the standpoint of "common sense" for one skilled in the art, because this would risk re-oxidizing any previously reduced iron oxide. Finally, such re-oxidizing would be inconsistent with the "thermally reducing" limitation of the claims. Thus, even in the absence of a limitation precluding an oxidizing atmosphere, and regardless of the teachings of Fuji et al, it would not have been obvious to have modified Meissner et al according to the rejected claims.

Concerning Fuji et al, lines 23-31 of column 4 thereof disclose supplying a secondary combustion air to burn combustible gases released from the iron oxide agglomerates and carbonaceous material, but fail to disclose that at least the secondary combustion air is oxygen enriched air, or that the oxygen concentration of the primary combustion air is controlled to be lower than the oxygen concentration in the secondary combustion air. Fuji et al is therefore incapable of overcoming the shortcomings of Meissner et al.

Nor can the claimed lower oxygen concentration in the primary combustion air be dismissed as the result of routine experimentation within the teachings of the art, to optimize productivity, since it is contrary to the teachings of Meissner et al.

As for Sarma et al, this reference cannot teach this missing feature because it teaches superstoichiometric ratios in the oxidizing zone, with elevated concentrations of oxygen in the oxidant, which would suggest a high oxygen concentration in the primary combustion air of Meissner et al. This is the opposite of the claims.

Finally, it is noted that new dependent Claim 7 recites that the thermally reducing step is performed in a reducing atmosphere, and so would evidently overcome the objections noted in the Office Action.

Concerning the rejection of dependent Claim 2-3 as being obvious over the aforementioned prior art, and further in view of Nishimura et al, it is noted that Nishimura et al was cited to teach the CO concentration of the dependent claims. Nishimura et al therefore would not overcome the shortcomings of the primary references with respect to Claim 1, and so the claims define over these references.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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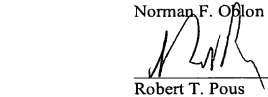

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